Remarks/Arguments:

Applicant have now filed a Request for Continued Examination (RCE) and a Preliminary Amendment. The Preliminary Amendment is in response to the Final Office Action, dated May 6, 2004.

Claims 1-3, 5-9, 12, 17, 20, 22, 23, and 31-42 are pending. These claims have now been amended in the Preliminary Amendment.

Section 103 Rejections

Claim 1 has been rejected as being obvious in view of Okuyama, Ekushingu, and Al-Tuwaijry. Applicants respectfully submit that this rejection is overcome for the reasons set forth below.

Applicants' invention, as recited in amended claim 1, includes features which are not anticipated or suggested by the cited references, namely:

- the plurality of types of authentication rules includes a **first rule** configured to **use a public key and a secret key** to provide a first type of encryption having high-security against forgery or alteration,

- a **second rule** configured to **use a common key** to provide a second type of encryption having low-security against forgery or alteration,

- **the public and secret keys, and the common key** are used for transmitting the digital AV data **from a transmission unit to a plurality of receiving units**,

- such that **a sole single key which does not depend on the respective receiving units** is transmitted, depending on the security level, from the transmitting unit to the receiving units, and

- if the first rule or the second rule is selected by the transmitting-side authenticating means, the digital AV data **encrypted using the transmitted sole single key is transmitted from the transmitting unit to the receiving units**.

As previously discussed in the Response to the Office Action, dated October 6, 2003, basis for amended claim 1 may be found in the specification, for example, at page 33, lines 5-8. The authentication includes **two types of rules**, namely **an authentication rule using a public key and a secret key, and an authentication rule using a common key**.

As shown, for example, in Figure 15, the public and secret keys (Sa, Pa), (Sb, Pb) may be used for transmitting the digital AV data from the transmitting side to the receiving side. In addition, as shown, for example, in Figure 12, a common key (Kab) may be used for transmitting the digital AV data from the transmitting side to the receiving side.

Moreover, amended claim 1 recites that **a sole single key** (Kex in Figure 15, for example) **which does not depend on the plurality of receiving units is transmitted**. This sole single key is transmitted, based on the security level, from a transmitting unit to a plurality of receiving units. Amended claim 1 further recites that if the first rule or the second rule is encrypted at the transmitting unit, using the sole single key, then this sole single key is transmitted from the transmitting unit to the **plurality of receiving units**.

The invention, as recited in amended claim 1, advantageously, may transmit the same digital AV data from a transmitting unit to several receiving units, after encryption. The transmitting unit does not have to encrypt the data multiple times, wherein each time corresponds to a different receiving unit. The transmitting unit, advantageously, **only has to carry out the encryption once using the sole single key**. Consequently, the processing load of the transmitting unit it very light. Moreover, the number of receiving units, which can receive the transmitted data, is not restricted by bandwidth.

Another advantage of the invention, as recited in amended claim 1, is that the invention may be applied to broadcast type of transmissions, where the plurality of receiving units connected to a bus may receive the data transmitted from the transmitting unit. The

transmitting unit cannot predict timings of data reception by the receiving units in advance. Therefore, the transmitting unit may use the sole single key in the encryption for each of the receiving units.

As previously discussed in the Response to the Office Action, dated October 6, 2003, neither Okuyama, nor Ekushingu discloses the features of the plurality of types of authentication rules including a first rule configured to use a public key and a secret key and a second rule configured to use a common key.

The Office Action, however, states that Al-Tuwaijry discloses that a private key system (DES) is more widely used than a public key system (RSA). The private key system is faster and easier to use but provides low security, and the public key system provides much higher security but is very slow.

Applicants note that Al-Tuwaijry discloses a public key and a private key, but does **not** disclose the keys recited in amended claim 1, namely **a first rule configured to use a public key with a secret key, and a second rule configured to use a common key**. Furthermore, Al-Tuwaijry only discloses that a public key is more secure than a private key. The invention, as recited in amended claim 1, however, includes a **single system having two levels of encryptions**. One system includes a first type of encryption that provides a high level of security and uses a public key and a secret key. **The same system** also has a second type of encryption that provides a low level of security and uses a common key. Al-Tuwaijry does not disclose such a system.

Furthermore, Al-Tuwaijry does **not** disclose using the public and secret keys, and the common key for transmitting data from a transmitting unit to **a plurality of receiving units**. Furthermore, Al-Tuwaijry does **not** disclose using **a sole single key which does not depend on the plurality of receiving units,** and transmitting this sole single key from the transmitting unit to the plurality of receiving units, depending on the security level from the transmitting unit.

Favorable reconsideration is requested for amended claim 1. Although not the same, independent claims 2, 3, 7-9, 17, 20, 22, 23 and 31-33 have been amended to include features

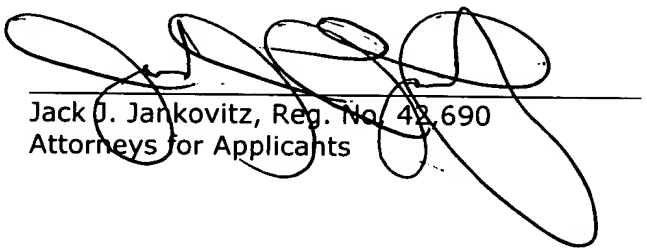
similar to amended claim 1. These claims are, therefore, also not subject to rejection in view of the cited references for the same reasons set forth for amended claim 1.

The remaining pending claims are dependent, respectively, from the above amended independent claims and, therefore, are not subject to rejection in view of the cited references for at least the same reasons set forth for amended claim 1. Reconsideration is requested.

Conclusion

Claims 1-3, 5-9, 12, 17, 20, 22-23 and 31-42 are in condition for allowance.

Respectfully submitted,



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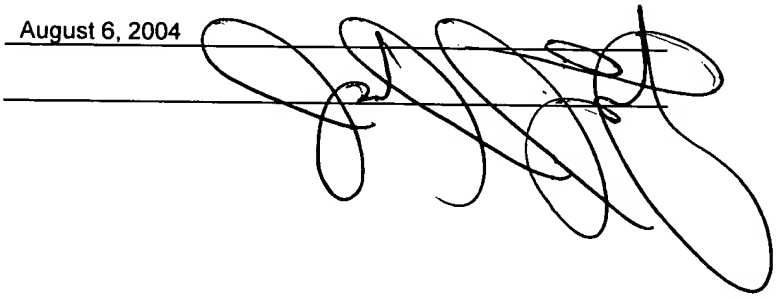

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